Data Product Specification of PANSA Obstacle Data Sets (eTOD)

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Published	2024-06-13
Language	English
Extent of the data product	1. eTOD Area 1 Obstacle Data Set: FIR EPWW; 2. eTOD Area 2 Obstacle Data Sets: Penetrations of the aerodrome Obstacle Limitation Surfaces (OLS) of the following aerodromes: EPBY, EPGD, EPKK, EPKT, EPLB, EPLL, EPMO, EPPO, EPRA, EPRZ, EPSC, EPSY.
Topic category	Transportation
Keywords	Obstacles

Overview of the data product

The Polish Obstacle Data Set is not a full eTOD data set as it contains only the eTOD Area 1 Obstacle data set and eTOD Area 2 data sets of obstacles penetrating the aerodrome Obstacle Limitation Surfaces (OLS) for the following aerodromes: EPBY, EPGD, EPKK, EPKT, EPLB, EPLL, EPMO, EPPO, EPRA, EPRZ, EPSC, EPSY. It is not a full initial data set.

The descriptions and requirements of the Areas 1, 2 (a-d), 3 and 4 obstacles can be found in ICAO Annex 15, 16th Edition and PANS-AIM (Doc 10066), 1st Edition as well as in EUROCONTROL TOD Manual, Edition 3.0.

Area 1 and Area 2 data sets of obstacles penetrating the aerodrome Obstacle Limitation Surfaces (OLS) are collected and published according to ICAO Annex 15, 16th Edition requirements.

Obstacle data is not provided for Areas: 2a, 2b, 2c, 2d, Area 3 and Area 4.

History of changes to the DPS

Version	Date	Reason for change	Changed sections
1.0	2022-01-27	Creation of document	All
1.1	2022-05-19	Content changes	Logo on the cover page
1.2	2022-12-01	Content changes	Appendix 1. PANSA Obstacle Data Sets (eTOD) available attributes
1.3	2024-06-13	Content changes	Reference system

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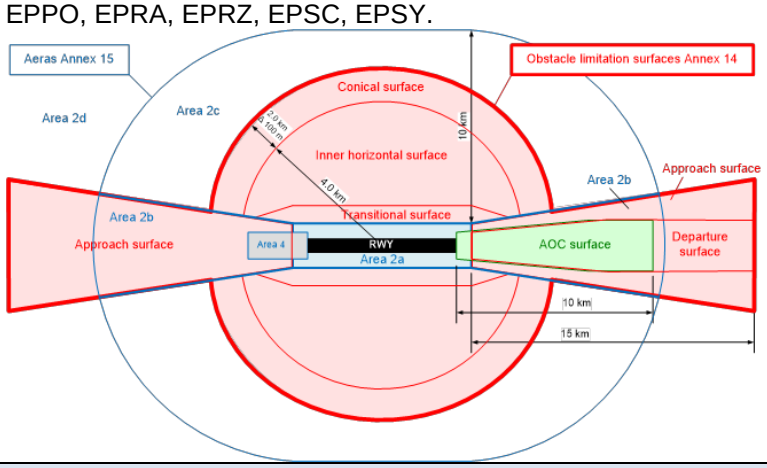
1. Specification scope	
Title	PANSA Obstacle Data Sets (eTOD) for Area 1 (FIR EPWW) and Area 2 data sets of obstacles penetrating the aerodrome Obstacle Limitation Surfaces (OLS)
This version	https://www.ais.pansa.pl/en/publications/etod/
Latest version	https://www.ais.pansa.pl/en/publications/etod/
Published	2022-12-01
Updated	In accordance with the AIRAC cycle
Language	English
Contact	Aeronautical Information Service 02-147 Warszawa, ul. Wieżowa 8 AIS HQ: +48-22-574-5625, fax: +48-22-574-5619 e-mail: ais.poland@pansa.pl
Web location	https://ais.pansa.pl
Format	CSV
Maintenance	The data product specification is updated regularly and reviewed at least once every year.
Handling restrictions	Unrestricted
Terms and definitions	See ICAO Annex 15, 16th Edition and PANS-AIM (Doc 10066), 1st Edition
Abbreviations	eTOD Electronic Terrain and Obstacle Data For additional abbreviations, see ICAO Annex 15, 16th Edition and PANS-AIM (Doc 10066), 1st Edition
2. Data product Identification	
Official title	PANSA Obstacle Data Sets (eTOD) for Area 1 and Area 2. Area 2 data sets contain only obstacles penetrating the aerodrome Obstacle Limitation Surfaces (OLS); These are not full initial data sets.
ID	eTOD_AREA%_Obstacles_%AIRAC_DATE%.csv
Abstract	Obstacle data set for eTOD Area 1. eTOD Area 2 data sets of obstacles penetrating the aerodrome Obstacle Limitation Surfaces (OLS); these are not full initial data sets. Area 1 and Area 2 data sets of obstacles penetrating the aerodrome Obstacle Limitation Surfaces (OLS) are collected and published according to ICAO Annex 15, 16th Edition requirements. Obstacle data is not provided for Area 2a, 2b, 2c, 2d, Area 3 and Area 4.
Purpose	The purpose of the data product is to provide obstacle data for air navigation applications. ICAO PANS-AIM, Chapter 5.3.3.2 provides possible uses of the data. It is the responsibility of the users to determine if the data product meets their needs.
Topic category	Transportation
Keywords	Vector
Spatial representation	Points
Spatial resolution	Not applicable
Supplemental information	*NIL*

Restrictions	Use limitations: For aviation operational use only. Access restrictions: For subscribers only, order form available under link: https://www.ais.pansa.pl/form/order/orderform_en.htm Usage restrictions: Please see disclaimer: https://www.ais.pansa.pl/en/about-ais/disclaimer Legal protection of AIS publications: https://www.ais.pansa.pl/en/publications/legal-protection-of-ais-publications Security restrictions: After downloading the data, please check attached CRC32 and MD5 checksums.
Extent	FIR EPWW: Area 2 data sets of obstacles penetrating the aerodrome Obstacle Limitation Surfaces (OLS) of the following aerodromes: EPBY, EPGD, EPKK, EPKT, EPLB, EPLL, EPMO, EPPO, EPRA, EPRZ, EPSC, EPSY. 
3. Data content and structure	
Application schema	Not applicable
Feature catalogue	See Appendix 1
4. Reference system	
General scope	
Spatial reference system	Horizontal reference system: WGS-84 (EPSG: 4326) Vertical reference system: Kronstadt-86 (OTHER:PLKRON86NH) or Amsterdam (OTHER:PLEVRF2007NH)
Temporal reference system	Gregorian Calendar, UTC.
5. Data quality requirements	
General scope	
Requirement 1	Data quality element: Assurance (Integrity). Data quality measure: The horizontal and vertical position integrity are classified as “essential”. The procedures for processing obstacles have been setup to meet the integrity requirements.
Requirement 2	Data quality element: Traceability

	Data quality measure: All actions over the obstacle objects are traced and saved in the metadata. Metadata is available on request.
Requirement 3	Data quality element: Timeliness Data quality measure: Timeliness is assured by providing the start and end time position of all obstacles.
Requirement 4	Data quality element: Completeness Data quality measure: The content of the data set was checked by visual inspection.
Area 1	
Requirement 1	Data quality element: Horizontal accuracy Data quality measure: The horizontal accuracy is 50 m at 90% confidence level.
Requirement 2	Data quality element: Vertical accuracy Data quality measure: The vertical accuracy is 30 m at 90% confidence level.
Requirement 3	Data quality element: Horizontal position resolution Data quality measure: The horizontal position resolution is expressed in degrees, minutes, seconds and decimal seconds with 2 decimal places (DDMMSS.ss), commensurate with the accuracy requirements. The resolution is sufficient to guarantee the accuracy requirements.
Requirement 4	Data quality element: Vertical position resolution Data quality measure: The vertical position resolution is 0.01 ft, commensurate with the accuracy requirements. The resolution is sufficient to guarantee the accuracy requirements.
Area 2 data sets of obstacles penetrating the aerodrome Obstacle Limitation Surfaces (OLS)	
Requirement 1	Data quality element: Horizontal accuracy Data quality measure: The horizontal accuracy is 5 m at 90% confidence level.
Requirement 2	Data quality element: Vertical accuracy Data quality measure: The vertical accuracy is 3 m at 90% confidence level.
Requirement 3	Data quality element: Horizontal position resolution Data quality measure: The horizontal position resolution is expressed in degrees, minutes, seconds and decimal seconds with 2 decimal places (DDMMSS.ss), commensurate with the accuracy requirements. The resolution is sufficient to guarantee the accuracy requirements.
Requirement 4	Data quality element: Vertical position resolution

	Data quality measure: The vertical position resolution is 0.01 ft, commensurate with the accuracy requirements. The resolution is sufficient to guarantee the accuracy requirements.
Area 3	
No data available	
Area 4	
No data available	
6. Data capture	
Description	Obstacle data capture rules are based on: • Commission Implementing Regulation (EU) 2020/469 • Regulation of the Minister of Infrastructure of 12 January 2021 on aviation obstacles, obstacle limiting surfaces and hazardous devices (Journal of Laws of the Republic of Poland 2021 item 264) • EUROCONTROL Terrain and Obstacle Data Manual v. 3.0, edition date: 04/05/2021, document reference: EUROCONTROL-GUID-158 • EUROCONTROL Specification for the Origination of Aeronautical Data (DO) - Volume 1 • EUROCONTROL Specification for the Origination of Aeronautical Data (DO) - Volume 2 Obstacle coverage areas have been created according to ICAO Annex 15, 16th Edition and PANS-AIM, 1st Edition.
Guide	NIL
Inclusion criteria	Obstacles must have a minimal height of 100 m above ground level to be included in the Area 1 obstacle dataset. Obstacles must penetrate the aerodrome Obstacle Limitation Surfaces (OLS) to be included in the Area 2 data sets.
Data acquisition and processing	The data was captured and processed by terrestrial survey.
7. Data maintenance	
General scope	
Description	The data set will be updated every AIRAC cycle.
Frequency	Continually
User defined	Not applicable

8. Data portrayal	
Portrayal rules	Not applicable
9. Data product delivery	
General scope	
Format name	csv files
Format version	Not applicable
Format specification	Not applicable
File structure	See Appendix 1 ; csv separator
Language	English
Character set	UTF-8
10. Metadata	
General scope	
Specification	NIL
11. Additional information	
General scope	
Additional information	Not applicable

Appendix 1. PANSA Obstacle Data Sets (eTOD) available attributes

Feature
Latitude
Longitude
Height
Height Uom
Elevation
Elevation Uom
Vertical Accuracy
Vertical Accuracy Uom
Horizontal Accuracy
Horizontal Accuracy Uom
Obstacle Identifier
Location
Local language obstacle type
Lighting
Horizontal reference system
Marking
Obstacle type
Data originator identifier
Horizontal confidence level
Horizontal confidence level UOM
Horizontal resolution
Horizontal resolution UOM
Horizontal extent
Horizontal extent Uom
Vertical confidence level
Vertical confidence level UOM
Vertical resolution
Vertical resolution UOM
Geometry type
Integrity
Elevation reference
Identification of the data originator
Lighting color
Lighting intensity
Lighting type
Date of construction
Date of notification